



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,403	02/15/2001	Fred Bunn	1875.0460001/RES/TCF	4798

26111 7590 02/06/2007
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

SEFCHECK, GREGORY B

ART UNIT	PAPER NUMBER
----------	--------------

2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

87

Office Action Summary	Application No.		Applicant(s)	
	09/783,403		BUNN ET AL.	
	Examiner		Art Unit	
	Gregory B. Sefcheck		2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/13/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8-12,15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8-12,15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- Applicant's Amendment filed 11/13/2006 is acknowledged.
- No claims have been amended.
- Claims 2, 7, 13, 14 were previously cancelled.
- Claims 1, 3-6, 8-12, 15, and 16 remain pending.

Claim Objections

1. Claims 1, 5, 6, 10-12, and 15 are objected to because of the following informalities: Claims include "adapted to" language that suggests or makes optional but does not require the particular steps to be performed. Subsequently, the claims raise a question as to the limiting effect of the language. Please see MPEP 2111.04.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-6, 8-12, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman (US006438123B1) in view of Fijolek et al. (US006510162B1), hereafter Fijolek.

- In regards to Claims 1, 4-6, 9-12, and 15,

Chapman discloses a method and system for supporting header suppression when transmitting cable modem data to a network (Title; Abstract; Fig. 1; claim 1,6,11,12 – cable modem system and method for transferring data from user to network).

Referring to Fig. 1, Chapman discloses a DOCSIS-compliant cable modem termination system 18 coupled to cable modems 19/22 and the Internet 17 (Col. 3, lines 50-57; claim 1,6,11 – cable modem termination system coupled to cable modem via cable network; claim 4,9 – network is Internet).

Chapman discloses that the cable modem suppresses transmission of Ethernet, UDP, and IP packet headers received from a user and transfers the suppressed packets to the CMTS, where the suppressed headers are restored to the packet data (Col. 2, lines 1-23; claim 1,6,11,12 – cable modem receives data packets from user, modify the contents in accordance with non-DOCSIS transfer protocol, transfer to termination system; claim 5,10,15 – cable modem modifies contents by suppressing header information).

Chapman discloses the CMTS restores the suppressed headers of the packets before sending the packets to a destination, rather than transferring the modified packets to a headend server that receives the suppressed packets from the CMTS and restores the packets before transmission to a destination.

Fijolek discloses a system for managing channel usage in a data over cable system (Title). Referring to Fig. 1, Fijolek shows headend server 25 containing content,

Art Unit: 2616

operations, administrative and maintenance servers coupled to CMTS 12 and network 28 (Col. 5, lines 52-55; claim 1,6,11,12 – headend server coupled to termination system and network). Referring to Figs. 5 and 6, Fijolek shows that data from cable modem 16 is transferred from CMTS 12 to server 25 to provide network management, class of service and quality of service connection set-up before being transmitted to network 28 by CMTS 12. It is inherent that data transmitted from the CMTS to the server contain a unique address for the server equipment (Col. 12-13, lines 10-64; claim 1,6,11,12 – termination system adapted to receive modified packets and transfer to headend server in accordance with unique hardware address appended to packets; claim 1,6,11,12 – headend server adapted to restore contents of packets to unmodified state and transfer to network/CMTS; claim 11 – termination system receives and transfers restored packets to network; claim 5,10,15 – server restores contents by restoring suppressed header information).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Chapman by transferring suppressed header packet data from a CMTS to a headend server before restoring the packets and transmitting over a network, as shown by Fijolek. This modification would improve system performance by providing network management for the cable modems served by the CMTS while maintaining the bandwidth efficiency provided by the suppressed headers.

- In regards to Claims 3, 8, and 16,

Chapman discloses a method and system for supporting header suppression when transmitting cable modem data to a network that covers all limitations of the parent claims.

Chapman discloses the use of Ethernet addressing for communicating the cable modem data to the CMTS and the network. However, Chapman does not explicitly show appending Ethernet address information to the packets corresponding to the headend server.

Fijolek discloses that server 25 is connected to the CMTS 12a-c over local network 23, which may include any suitable network, including Ethernet. It is inherent that data communicated over an Ethernet network contain appended Ethernet address information for the particular hardware being transmitted to (Col. 12, lines 20-22; claim 3,8,16 – cable modem appends Ethernet address information to direct modified packets to headend server).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system and method of Chapman by using Ethernet addressing for communicating header-suppressed packet data from the cable modem to the CMTS and/or a server, as shown by Fijolek. This would provide a standard mechanism for transferring header-suppressed data to the CMTS/server before transmitting the data across the network.

Response to Arguments

4. Applicant's arguments filed 11/13/2006 have been fully considered but they are not persuasive.

- In the Remarks on pgs. 9-12 of the Amendment, the Applicant contends that neither Chapman nor Fijolek discloses appending a unique hardware address of a headend server to modified data packets, as claimed.
- The Examiner respectfully disagrees. As shown in the claim rejections and previously noted in the Response to Arguments by the Examiner in the Office Action filed 7/12/2006, Fijolek illustrates functionality such as initialization, network management, class and quality of service functions, etc. (header suppression restoration) implemented in a separate server between the CMTS and the network, rather than within the CMTS itself (as in Chapman). Column 12, lines 20-22 in Fijolek states that server 25 is connected to the CMTS 12a-c over the local network 23, which may include any suitable network, including Ethernet. As known to one of ordinary skill in the art, communication within an Ethernet network comprises the use of Ethernet frames, which specify a destination address, where each piece of hardware within the Ethernet network is assigned a unique address. Therefore, it is inherent in Fijolek that data communicated from the CMTS to the server, which is shown to be connected through a local network such as Ethernet, would require a unique address of the server to be appended to the data.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory B. Sefcheck whose telephone number is 571-272-3098. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GBS GBS
1-29-2007



HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600